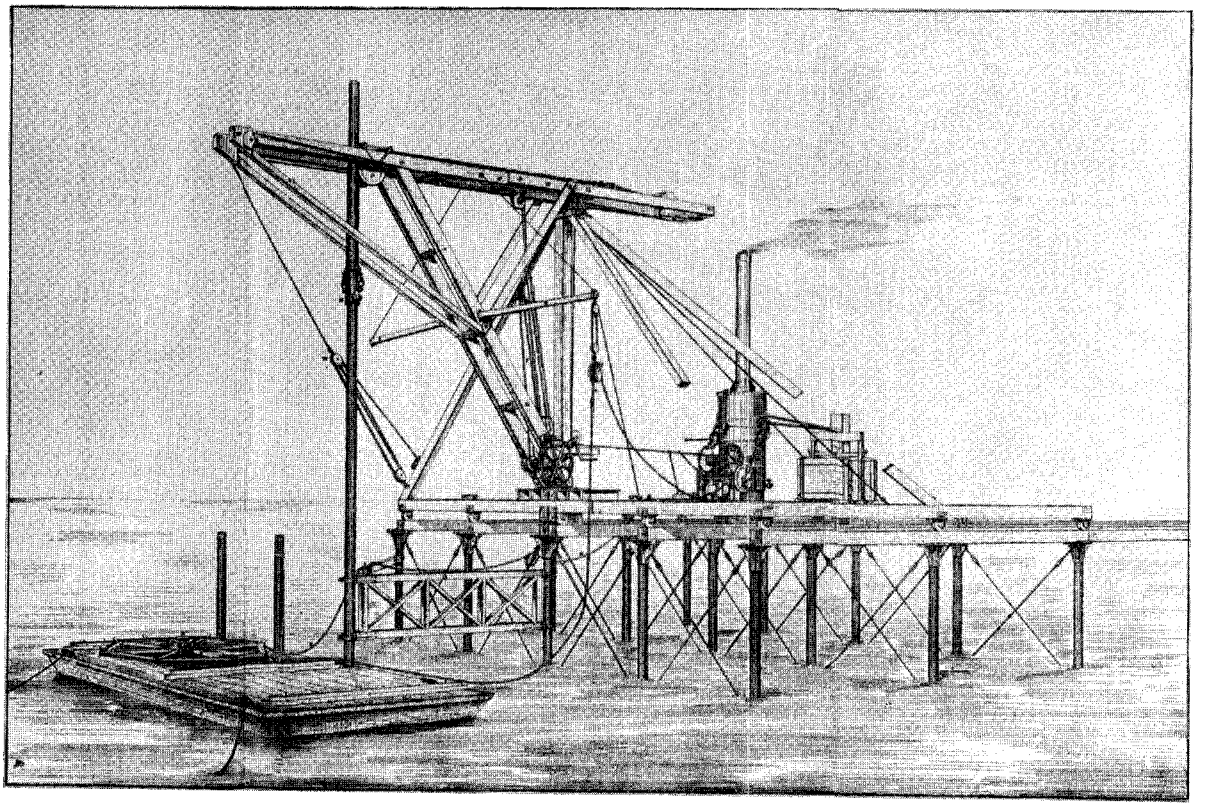
APPENDIX IV

THE IRON PIER

The Lewes-Henlopen area possessed natural characteristics potentially amenable to the development of a transportation center of economic importance. That it did not so evolve is but one of many instances of shifting economic fortune that characterized the protean Nineteenth Century. The curving shore of the strait embraced the waters of Breakwater Harbor, which, thanks to a rugged entrance through the Delaware Capes, was frequently filled by hundreds of trading vessels of all classes from ships to skiffs, seeking shelter there.

By 1870, vessels were using Lewes as a port of call although port facilities were extremely limited: besides the moles of the breakwater, a single pier extended offshore to a depth of 16 feet, on which the Junction and Breakwater Railroad rolled its vehicles right to the water's edge. The Iron Pier, or United States Pier, was projected to augment the area's port facilities as well as to implement Government operations at the Cape Henlopen reservation. Evidence of this purpose can be found in the terms of the act authorizing Iron Pier, dated 15 July 1870, and granting "use of the pier



The method of driving screw piles for the Iron Pier in 1877 and 1878 was illustrated for the Annual Report by Mr. A. Stierle, Captain Ludlow's Assistant Engineer.

for railroad purposes" to the Junction and Breakwater Railroad.

Construction was begun at the site in 1871, with the first pile driven in April 1872. The authorization called for "a substantial pier of stone or iron;" the project plan specified the installation of wrought iron screw pile shafts and a superstructure of yellow pine timber as offering the greatest strength and the least interference with the natural currents of the harbor[1]. The pier extended offshore 1700 feet to a water depth of 22-feet. From the start of work, appropriations were made annually, except in 1877, until the pier's completion in 1880. After eight years of construction, it was deemed necessary to replace a large amount of timber in the superstructure, the expenditure for which was included in the final cost figure of $358,339.40. The repairs were completed in 1882.

In his report of 1896, the District Engineer requested revocation by Congress of the right granting the railroad use of the pier, since that right had been waived the previous 16 years. During the construction of Iron Pier, railroad development had advanced phenomenally; the freight equipment of the 1890's was now too heavy for the structure to support. In the same report the District Engineer recommended the appointment of a harbor master and establishment of clear regulations governing use of the pier and adjacent Breakwater Harbor. These steps were clearly needed, especially during the confusion created by heavy ice floes in the bay, when the harbor became crowded with shipping and an excessive number of vessels sought shelter below the Iron Pier.

Iron Pier was provisionally transferred by Congress to the Marine Hospital Service in 1890 and became an important adjunct of the United States Quarantine System, which had established a station at the Cape Henlopen reservation in 1884. A cholera threat in 1892 occasioned the initiation of a rigid inspection system for all vessels entering the harbor from foreign ports; Philadelphia had become an important port of entry for immigrants and many Philadelphians feared a repetition of historic epidemics which had swept the city before[2]. Iron Pier and the breakwater station could not provide all the needed services and, in 1893 an additional boarding and disinfecting station was opened at the northern end of Reedy Island, on the site of the old ice harbor.

Iron Pier is interesting as a kind of landmark along the route of an evolving American technology. An example of a national trend which sought generally to replace wood with metal, its initial construction was laboriously undertaken by man and mule power; not until 1877 was steam applied to the work. In 1872, the first year of the pile driving, successful experiments were made with water jets to assist in forcing pile shafts into the river bottom. In that same year, the Engineer Department instituted the eight-hour work day.